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Abstract

**EXPERIMENTAL STUDY OF SOME METHODS OF COMPENSATION
OF HIGH EXCESS REACTIVITY**

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The paper contains results of experimental investigations of the methods of compensation of high excess reactivity by separating two halves of the core or by inserting compensating cylinders enclosed in boron-containing material into a side beryllium reflector.

The efficiency of these methods of compensation is compared with that of a single boron-carbide rod placed in the centre of the core.

The distortion of the neutron density distribution is presented as a function of the angular position of the recompensation cylinder and of the separation between two halves of the core.

An attempt was made to evaluate the efficiency of separating halves of the core for intermediate reactors by numerical computations based on one-group theory.

The results of the investigation of the absorbing rods interference prove that the main contribution to the interference comes from pair interactions.

The experimental data permit to evaluate the efficiency of the absorbing rod system.

The experiments were carried out with beryllium moderated intermediate zero power reactors on the PF-4 physical assembly described elsewhere.